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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/327,594	06/08/1999	HULYA DEMIRYONT	03897.08139	5631

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EXAMINER

MCNEIL, JENNIFER C

ART UNIT	PAPER NUMBER
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1775

13

DATE MAILED: 09/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/327,594

Applicant(s)

DEMIRYONT, HULYA

Examiner

Jennifer McNeil

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/23/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 15 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 1775

DETAILED ACTION

Claim Objections

Claim 11 is objected to because of the following informalities: Zinc stannate is misspelled.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-7, and 10-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Gillery (US 4,948,677). Gillery teaches a high-transmittance, low emissivity article including copper containing layers used as primer layers which are placed between metal and metal oxide films. The copper-containing layer may be copper oxide, and is deposited by sputtering (col. 2, lines 5-20; col. 4, lines 29-44; col. 6, lines 12-15). Regarding claims 10-14, other layers included in the article may be zinc stannate, with a thickness of about 340 angstroms (col. 4, lines 50-55; col. 5, lines 5-10). Regarding claims 6 and 7, a soda-lime silica glass substrate is used in the example given in col. 5, lines 1-3.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1775

Claims 2, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillery (US 4,948,677). Gillery teaches an article having a coating of copper oxide as discussed above, but does not give a specific thickness of the coating, and does not give specific examples of the type of glass on which the coating may be formed. Gillery does teach that the primer layer, which may be made of copper oxide, has a minimal thickness (col. 5, lines 25-30). Considering that the other films in the coating have thicknesses of about 90-430 angstroms, it would have been obvious to one of ordinary skill in the art to keep the thickness of the layers to a minimum to ensure the coating still maintains a high transmittance, and therefore would have a copper oxide coating within the range of 150-2000 angstroms.

Gillery also teaches that the coating may be applied to substrates such as glass, ceramics, and plastics that are not detrimentally affected by the operating conditions of the coating process (sputtering). Gillery's invention is directed toward improving glazed window units. Absent a showing of unexpected results, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any glass substrates of the type suitable for windows.

Response to Arguments

The rejection over Miyauchi '331 is withdrawn in light of Applicant's comments.

Applicant's arguments regarding Gillery '677 filed July 23, 2002 have been fully considered but they are not persuasive. Applicant argues that Gillery teaches the use of copper containing layers as primer layers and that nowhere sputter coats the layer onto a transparent substrate. Gilley repeatedly refers to glass substrates as the substrate onto which the coatings are to be applied (col. 1, lines 62-65; col. 3, lines 55-62; col. 5, lines 1-3; col. 6, lines 8-10). Gillery also repeatedly refers to the deposition of all the layers by sputtering. It is not clear how applicant is differentiating their invention from this reference.

Upon closer consideration, Gillery is considered to read on claims 4 and 6. Claim 4 states that the thermostable coating lays directly on the substrate. This is not interpreted to mean that the copper oxide layer lies directly on the substrate. Applicant clearly teaches on page 6 of the specification that when used as

Art Unit: 1775

an integrated coating, "the thermostable coating has not only the copper oxide layer, but also at least one other coating layer lying directly over or under the copper oxide layer".

Regarding claim 6, the reference to a soda lime silica glass is in col. 5, lines 1-3.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer McNeil whose telephone number is 703-305-0553. The examiner can normally be reached on Monday through Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on 703-308-3822. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jennifer McNeil
Examiner
Art Unit 1775


DEBORAH JONES
SUPERVISORY PATENT EXAMINER

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September 19, 2002

